

We claim:

- 5 1. A composite material comprising:  
a substrate having a first and a second surface;  
a boundary layer on the first surface of the substrate, and  
a topical application on the surface of the boundary layer opposite of the  
substrate;

wherein the transfer forces necessary to separate the topical application from the boundary layer are lower than the transfer forces necessary to separate the substrate from the boundary layer, whereby transfer efficiency of the topical application is enhanced.

2. The composite material of Claim 1 wherein the boundary layer and the topical application have a low affinity towards the other.

3. The composite material of claim 1 for application to skin wherein the boundary layer has a lower melt temperature than the substrate, whereby the boundary layer liquifies when exposed to a temperature of at least about 25°C, thereby reducing the transfer forces necessary to transfer the topical application to the skin.

4. The composite material of Claim 1 wherein the boundary layer is applied to the substrate during melt processing of the substrate or is applied topically after melt processing.

5. The composite material of Claim 1 wherein the substrate may be treated with a surfactant to promote wettability of the substrate.

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6. The composite material of Claim 1 wherein the boundary layer is comprised of one or more compositions.

7. The composite material of claim 6 wherein the boundary layer is further comprised of multiple layers of one or more compositions.

8. The composite material of Claim 7 wherein the compositions comprising the boundary layer have low affinity to each other and may be separated from each other with low transfer forces.

9. The composite material of Claim 1 for application to skin wherein the topical application is a lotion or ointment, particulate, or a combination thereof.

10. The composite material of Claim 9 wherein the lotion or ointment is selected from a group consisting of natural fats and oils and waxes, synthetic fats and oils and waxes, fatty acids, fatty acid esters, polyhydroxy fatty acid esters, polyhydroxy fatty acid amides, fatty alcohols, fatty alcohol ethoxylates, essential oil, polymers, sterols and sterol derivatives, humectants, and a combination or blend thereof.

11. The composite material of Claim 9 wherein the lotion or ointment is petrolatum based.

12. The composite material of Claim 9 wherein the lotion or ointment is comprised a blend or combination of petrolatum, ozokerite wax and ethylene/vinyl acetate copolymer.

13. The composite material of Claim 9 wherein the lotion or ointment is comprised a blend or combination of petrolatum, ozokerite wax, sunflower seed oil, soy sterol, ethylene/vinyl acetate copolymer, dimethicone, and alkyl dimethicone wax.

14. The composite material of Claim 9 wherein the lotion or ointment is comprised a blend or combination of petrolatum, ozokerite wax, sunflower seed oil, soy sterol, ethylene/vinyl acetate copolymer, dimethicone, alkyl dimethicone wax, colloidal silica, and montmorillonite clay.

15. The composite material of Claim 1 wherein the substrate is selected from woven fabrics, knit fabrics, nonwoven fabrics, foams, film-like materials and paper materials.

16. The composite material of Claim 15 wherein the substrate comprises a nonwoven web.

17. The composite material of Claim 16, wherein the nonwoven web comprises a spunbond web, meltblown web, coformed web or bonded carded web.

18. The composite material of Claim 16 wherein said substrate comprises a multi-layer laminate.

19. The composite material of Claim 1 wherein the boundary layer is applied only to a portion of the substrate.

20. The composite material of Claim 1 wherein the topical application is applied only to a portion of the exposed boundary layer.

21. The composite material of Claim 20 wherein the topical application is applied to the boundary layer in strips.

22. A personal care product comprising the composite material of Claim 1.

23. The personal care product of Claim 22, wherein the personal care product is selected from a diaper, training pant, absorbent underpant, adult incontinence product, sanitary wipe, wet wipes, feminine hygiene product, wound dressing and bandage.

24. A method of forming a composite material adapted for ~~uses such as~~ transferring a topical application from a substrate to a surface, said method comprising:  
providing a substrate;  
applying a boundary layer to the substrate; and  
applying a topical application to the boundary layer.

25. The method of Claim 24, wherein the method further comprises subjecting the boundary layer to at least one condition which facilitates separation of the topical application from the substrate and promotes transfer of the topical application to the surface.

26. The method of Claim 25 wherein the step of subjecting the boundary layer to at least one condition which facilitates separation of the topical application from the substrate and promotes transfer of the topical application to the surface comprises:

subjecting the boundary layer to transfer forces sufficient to separate the topical application from all or part of the boundary layer.

27. The method of Claim 25 wherein the step of subjecting the boundary layer to at least one condition which facilitates separation of the topical application from the substrate and promotes transfer of the topical application to the surface may further comprise:

- 5            exposing the boundary layer to a temperature sufficient to permit the boundary layer to liquify, whereby the boundary layer liquifies thereby allowing the topical application to be transferred to the surface.

28. The composite material of Claim 24 wherein the boundary layer is applied to the substrate during melt processing of the substrate or is applied topically after melt processing.

29.     The method of Claim 27 for application to skin wherein the temperature sufficient to permit the boundary layer to liquify is at least about 25°C.

30.     The method of Claim 26 wherein the transfer forces sufficient to allow the topical application to separate from all or part of the boundary layer is provided by the movement of a person using the substrate.

31. The method of Claim 24 wherein the boundary layer is applied to the substrate in a variety of patterns.

32. The method of claim 24 wherein the topical application is applied to the boundary layer in a variety of patterns.

33. The method of Claim 24 wherein the surface is the outermost exposed layer of dermis or epidermis.

34. The method of Claim 24 wherein the substrate is a nonwoven web.

35. The method of Claim 24 wherein the substrate comprises a personal care product or component thereof.